

# Work Order ID 94147

\*94147\*

Page 1

November-30-12 9:29:52 AM

Item ID: D4271-027

Accept

\*N900040100\*

Setup Start \*NS1\*

Revision ID:

Item Name: End Fitting Assembly Aft Beam

Stop \*NS2\*

Start Date: 11/30/12 Start Qty: 4.00

\*4\*

Cust Item ID:

Required Date: 12/14/12 Req'd Qty: 4.00

\*4\*

Customer:

Reference:

Approvals: Process Plan: MLJ

Date: 12-12-03 Tooling:

Date:

Run Start \*NR1\*

QC:

Date:

SPC (Y/N):

Date:

Stop \*NR2\*

| Sequence ID/<br>Work Center ID | Operation<br>Description  | Set Up/<br>Run Hours | Tool ID | Tool # | Plan<br>Code | Accept<br>Qty | Reject<br>Qty | Reject<br>Number | Insp.<br>Stamp |
|--------------------------------|---|----------------------|---------|--------|--------------|---------------|---------------|------------------|----------------|
| Draw Nbr                       | Revision Nbr  |                      |         |        |              |               |               |                  |                |
| D4271                          | D   |                      | PICK    | Kit    |              | 5x            |               | 13-3-14          |                |
| 100                            |   | 0.00                 |         |        |              |               |               |                  |                |
| *100*                          |   |                      |         |        |              |               |               |                  |                |
| Small Fab                      | Memo  | 0.00                 |         |        |              |               |               |                  |                |
| Small Fab                      | Assemble as per dwg D4271<br>REAM HOLE AS PER DWG<br>CUT RIVET AT 1.130"<br>C' SINK AT .220" X100 DEG FOR HOLE OPPOSITE TO HEAD |                      |         |        |              |               |               |                  |                |
| 110                            | QC5- Inspect part completeness to step on W/O   | 0.00                 |         |        |              |               |               |                  |                |
| *110*                          |   |                      |         |        |              |               |               |                  |                |
| QC                             | Memo  | 0.00                 |         |        |              |               |               |                  |                |
| Quality Control                |   |                      |         |        |              |               |               |                  |                |
| 120                            | Identify as per dwg & Stock Location: GA  | 0.00                 |         |        |              |               |               |                  |                |
| *120*                          |   |                      |         |        |              |               |               |                  |                |
| Packaging                      | Memo  | 0.00                 |         |        |              |               |               |                  |                |
| Packaging                      |   |                      |         |        |              |               |               |                  |                |

(5) 13-03-15

DAS  
09  
89

5x

13/03/18

NCR: Yes / No

**WORK ORDER NON-CONFORMANCE / UPDATE**

DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

|  |      |      |     |   |                   |   |             |              |              |  |  |
|--|------|------|-----|---|-------------------|---|-------------|--------------|--------------|--|--|
| Work Order: _____<br><br>Part No. _____<br><br>NCR No. _____ |      |      |     | <b>DISPOSITION</b><br><br>Rework <input type="checkbox"/><br>Scrap <input type="checkbox"/><br>Use-as-is <input type="checkbox"/><br>Work Order Update <input type="checkbox"/> |                   | <b>AGAINST DEPARTMENT/PROCESS</b><br><br><div style="display: flex; justify-content: space-between;"> <div>           Skid-tube <input type="checkbox"/><br/>           Machining <input type="checkbox"/><br/>           Thermoforming <input type="checkbox"/><br/>           Large Fab <input type="checkbox"/> </div> <div>           Crosstube <input type="checkbox"/><br/>           Small Fab <input type="checkbox"/><br/>           Finishing <input type="checkbox"/><br/>           Composite <input type="checkbox"/> </div> <div>           Water Jet <input type="checkbox"/><br/>           Prod. Eng. Coord. <input type="checkbox"/><br/>           Rec/Store/Packaging <input type="checkbox"/><br/>           Supplier <input type="checkbox"/> </div> <div>           Engineering <input type="checkbox"/><br/>           Quality <input type="checkbox"/><br/>           Other <input type="checkbox"/> </div> </div> |             |              |              |  |  |
| Root Cause   | Date | Step | Qty | Description of work order update or Non-conformance   | Initial Chief Eng | Action Description  | Sign & Date | Verification | QC Inspector |  |  |
| Doc/Data <input type="checkbox"/>                            |      |      |     |   |                   |   |             |              |              |  |  |
| Equip/Tooling <input type="checkbox"/>                       |      |      |     |   |                   |   |             |              |              |  |  |
| Operator <input type="checkbox"/>                            |      |      |     |   |                   |   |             |              |              |  |  |
| Material <input type="checkbox"/>                            |      |      |     |   |                   |   |             |              |              |  |  |
| Setup <input type="checkbox"/>                               |      |      |     |   |                   |   |             |              |              |  |  |
| Other <input type="checkbox"/>                               |      |      |     |   |                   |   |             |              |              |  |  |
| Process <input type="checkbox"/>                             |      |      |     |   |                   |   |             |              |              |  |  |
| Supplier <input type="checkbox"/>                            |      |      |     |   |                   |   |             |              |              |  |  |
| Training <input type="checkbox"/>                            |      |      |     |   |                   |   |             |              |              |  |  |
| Unapproved <input type="checkbox"/>                          |      |      |     |   |                   |   |             |              |              |  |  |

| FAULT CATEGORY   |  |  |   |  |  |   |  |  |  |  |   |  |
|--|--|--|---|--|--|---|--|--|--|--|---|--|
| <b>Landing Gear</b><br><input type="checkbox"/> Bending<br><input type="checkbox"/> Centre Not Concentric to O/S<br><input type="checkbox"/> Cracks<br><input type="checkbox"/> Crushed/Crimped.<br><input type="checkbox"/> Cuffs<br><input type="checkbox"/> Heat Treat<br><input type="checkbox"/> Inspection Strip in Tube<br><input type="checkbox"/> Ripples in Bend<br><input type="checkbox"/> Torque Waves in Extrusion<br><input type="checkbox"/> Turning Sequence<br><input type="checkbox"/> Wave/Twist in Tube |  |  | <b>General</b><br><input type="checkbox"/> Bend<br><input type="checkbox"/> BOM/Route<br><input type="checkbox"/> Broken/Damaged<br><input type="checkbox"/> Burrs<br><input type="checkbox"/> Contamination<br><input type="checkbox"/> Countersink<br><input type="checkbox"/> Cut Too Short<br><input type="checkbox"/> Drill Holes<br><input type="checkbox"/> Drawing<br><input type="checkbox"/> Finish<br><input type="checkbox"/> Folio |  |  | <input type="checkbox"/> Grain<br><input type="checkbox"/> Hardware<br><input type="checkbox"/> Inspection Incomplete<br><input type="checkbox"/> Instructions Incomplete/Unclear<br><input type="checkbox"/> Maintenance<br><input type="checkbox"/> Mislabeled<br><input type="checkbox"/> Misread<br><input type="checkbox"/> Offset<br><input type="checkbox"/> Out of Calibration<br><input type="checkbox"/> Out of Sequence<br><input type="checkbox"/> Outside Dimensions |  |  | <input type="checkbox"/> Ovalized<br><input type="checkbox"/> Over/Under tolerance<br><input type="checkbox"/> Part Incorrect<br><input type="checkbox"/> Part Lost/Missing<br><input type="checkbox"/> Part Moved<br><input type="checkbox"/> Positioned Wrong<br><input type="checkbox"/> Power Loss/Surge |  | <input type="checkbox"/> Pressure/Forced<br><input type="checkbox"/> Temperature/Cure<br><input type="checkbox"/> Weld<br><input type="checkbox"/> Wrong Stock Pulled<br><input type="checkbox"/> Other |  |

**Work Order ID 94147****\*94147\***

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November-30-12 9:29:52 AM

Item ID: D4271-027

Accept

**\*N900040100\***Setup Start **\*NS1\***

Revision ID:

Stop **\*NS2\***

Item Name: End Fitting Assembly Aft Beam

Start Date: 11/30/12 Start Qty: 4.00

**\*4\***

Cust Item ID:

Required Date: 12/14/12 Req'd Qty: 4.00

**\*4\***

Customer:

Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

Run Start **\*NR1\***

QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Stop **\*NR2\***

| Sequence ID/<br>Work Center ID | Operation<br>Description                    | Set Up/<br>Run Hours | Tool ID | Tool # | Plan<br>Code | Accept<br>Qty | Reject<br>Qty | Reject<br>Number | Insp.<br>Stamp |
|--------------------------------|---|----------------------|---------|--------|--------------|---------------|---------------|------------------|----------------|
| 130                            | QC21- Final Inspection - Work Order Release | 0.00                 |         |        |              |               |               |                  |                |
| <b>*130*</b>                   |   |                      |         |        |              |               |               |                  |                |
| QC                             | Memo  | 0.00                 |         |        |              |               |               |                  |                |
| Quality Control                |   |                      |         |        |              |               |               |                  |                |

13/3/19

mf

13-3-18

NCR: Yes / No

## WORK ORDER NON-CONFORMANCE / UPDATE

DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

|  |                                    |  |                                      |   |                   |  |             |              |              |  |  |                                    |                                    |                                    |                                      |                                    |                                    |  |                                  |  |                                    |  |                                |                                    |                                    |                                   |  |
|--|------------------------------------|--|--------------------------------------|---|-------------------|--|-------------|--------------|--------------|--|--|------------------------------------|------------------------------------|------------------------------------|--------------------------------------|------------------------------------|------------------------------------|--|----------------------------------|--|------------------------------------|--|--------------------------------|------------------------------------|------------------------------------|-----------------------------------|--|
| Work Order: _____<br><br>Part No. _____<br><br>NCR No. _____ |                                    |  |                                      | <b>DISPOSITION</b><br><br>Rework <input type="checkbox"/><br>Scrap <input type="checkbox"/><br>Use-as-is <input type="checkbox"/><br>Work Order Update <input type="checkbox"/> |                   | <b>AGAINST DEPARTMENT/PROCESS</b><br><br><table style="width:100%; border: none;"> <tr> <td style="width: 25%;">Skid-tube <input type="checkbox"/></td> <td style="width: 25%;">Crosstube <input type="checkbox"/></td> <td style="width: 25%;">Water Jet <input type="checkbox"/></td> <td style="width: 25%;">Engineering <input type="checkbox"/></td> </tr> <tr> <td>Machining <input type="checkbox"/></td> <td>Small Fab <input type="checkbox"/></td> <td>Prod. Eng. Coord. <input type="checkbox"/></td> <td>Quality <input type="checkbox"/></td> </tr> <tr> <td>Thermoforming <input type="checkbox"/></td> <td>Finishing <input type="checkbox"/></td> <td>Rec/Store/Packaging <input type="checkbox"/></td> <td>Other <input type="checkbox"/></td> </tr> <tr> <td>Large Fab <input type="checkbox"/></td> <td>Composite <input type="checkbox"/></td> <td>Supplier <input type="checkbox"/></td> <td></td> </tr> </table> |             |              |              |  |  | Skid-tube <input type="checkbox"/> | Crosstube <input type="checkbox"/> | Water Jet <input type="checkbox"/> | Engineering <input type="checkbox"/> | Machining <input type="checkbox"/> | Small Fab <input type="checkbox"/> | Prod. Eng. Coord. <input type="checkbox"/> | Quality <input type="checkbox"/> | Thermoforming <input type="checkbox"/> | Finishing <input type="checkbox"/> | Rec/Store/Packaging <input type="checkbox"/> | Other <input type="checkbox"/> | Large Fab <input type="checkbox"/> | Composite <input type="checkbox"/> | Supplier <input type="checkbox"/> |  |
| Skid-tube <input type="checkbox"/>                           | Crosstube <input type="checkbox"/> | Water Jet <input type="checkbox"/>           | Engineering <input type="checkbox"/> |   |                   |  |             |              |              |  |  |                                    |                                    |                                    |                                      |                                    |                                    |  |                                  |  |                                    |  |                                |                                    |                                    |                                   |  |
| Machining <input type="checkbox"/>                           | Small Fab <input type="checkbox"/> | Prod. Eng. Coord. <input type="checkbox"/>   | Quality <input type="checkbox"/>     |   |                   |  |             |              |              |  |  |                                    |                                    |                                    |                                      |                                    |                                    |  |                                  |  |                                    |  |                                |                                    |                                    |                                   |  |
| Thermoforming <input type="checkbox"/>                       | Finishing <input type="checkbox"/> | Rec/Store/Packaging <input type="checkbox"/> | Other <input type="checkbox"/>       |   |                   |  |             |              |              |  |  |                                    |                                    |                                    |                                      |                                    |                                    |  |                                  |  |                                    |  |                                |                                    |                                    |                                   |  |
| Large Fab <input type="checkbox"/>                           | Composite <input type="checkbox"/> | Supplier <input type="checkbox"/>            |                                      |   |                   |  |             |              |              |  |  |                                    |                                    |                                    |                                      |                                    |                                    |  |                                  |  |                                    |  |                                |                                    |                                    |                                   |  |
| Root Cause   | Date                               | Step   | Qty                                  | Description of work order update or Non-conformance   | Initial Chief Eng | Action Description   | Sign & Date | Verification | QC Inspector |  |  |                                    |                                    |                                    |                                      |                                    |                                    |  |                                  |  |                                    |  |                                |                                    |                                    |                                   |  |
| Doc/Data <input type="checkbox"/>                            |                                    |  |                                      |   |                   |  |             |              |              |  |  |                                    |                                    |                                    |                                      |                                    |                                    |  |                                  |  |                                    |  |                                |                                    |                                    |                                   |  |
| Equip/Tooling <input type="checkbox"/>                       |                                    |  |                                      |   |                   |  |             |              |              |  |  |                                    |                                    |                                    |                                      |                                    |                                    |  |                                  |  |                                    |  |                                |                                    |                                    |                                   |  |
| Operator <input type="checkbox"/>                            |                                    |  |                                      |   |                   |  |             |              |              |  |  |                                    |                                    |                                    |                                      |                                    |                                    |  |                                  |  |                                    |  |                                |                                    |                                    |                                   |  |
| Material <input type="checkbox"/>                            |                                    |  |                                      |   |                   |  |             |              |              |  |  |                                    |                                    |                                    |                                      |                                    |                                    |  |                                  |  |                                    |  |                                |                                    |                                    |                                   |  |
| Setup <input type="checkbox"/>                               |                                    |  |                                      |   |                   |  |             |              |              |  |  |                                    |                                    |                                    |                                      |                                    |                                    |  |                                  |  |                                    |  |                                |                                    |                                    |                                   |  |
| Other <input type="checkbox"/>                               |                                    |  |                                      |   |                   |  |             |              |              |  |  |                                    |                                    |                                    |                                      |                                    |                                    |  |                                  |  |                                    |  |                                |                                    |                                    |                                   |  |
| Process <input type="checkbox"/>                             |                                    |  |                                      |   |                   |  |             |              |              |  |  |                                    |                                    |                                    |                                      |                                    |                                    |  |                                  |  |                                    |  |                                |                                    |                                    |                                   |  |
| Supplier <input type="checkbox"/>                            |                                    |  |                                      |   |                   |  |             |              |              |  |  |                                    |                                    |                                    |                                      |                                    |                                    |  |                                  |  |                                    |  |                                |                                    |                                    |                                   |  |
| Training <input type="checkbox"/>                            |                                    |  |                                      |   |                   |  |             |              |              |  |  |                                    |                                    |                                    |                                      |                                    |                                    |  |                                  |  |                                    |  |                                |                                    |                                    |                                   |  |
| Unapproved <input type="checkbox"/>                          |                                    |  |                                      |   |                   |  |             |              |              |  |  |                                    |                                    |                                    |                                      |                                    |                                    |  |                                  |  |                                    |  |                                |                                    |                                    |                                   |  |

| FAULT CATEGORY   |   |   |  |   |
|--|---|---|--|---|
| <b>Landing Gear</b><br><input type="checkbox"/> Bending<br><input type="checkbox"/> Centre Not Concentric to O/S<br><input type="checkbox"/> Cracks<br><input type="checkbox"/> Crushed/Crimped.<br><input type="checkbox"/> Cuffs<br><input type="checkbox"/> Heat Treat<br><input type="checkbox"/> Inspection Strip in Tube<br><input type="checkbox"/> Ripples in Bend<br><input type="checkbox"/> Torque Waves in Extrusion<br><input type="checkbox"/> Turning Sequence<br><input type="checkbox"/> Wave/Twist in Tube | <b>General</b><br><input type="checkbox"/> Bend<br><input type="checkbox"/> BOM/Route<br><input type="checkbox"/> Broken/Damaged<br><input type="checkbox"/> Burrs<br><input type="checkbox"/> Contamination<br><input type="checkbox"/> Countersink<br><input type="checkbox"/> Cut Too Short<br><input type="checkbox"/> Drill Holes<br><input type="checkbox"/> Drawing<br><input type="checkbox"/> Finish<br><input type="checkbox"/> Folio | <input type="checkbox"/> Grain<br><input type="checkbox"/> Hardware<br><input type="checkbox"/> Inspection Incomplete<br><input type="checkbox"/> Instructions Incomplete/Unclear<br><input type="checkbox"/> Maintenance<br><input type="checkbox"/> Mislabeled<br><input type="checkbox"/> Misread<br><input type="checkbox"/> Offset<br><input type="checkbox"/> Out of Calibration<br><input type="checkbox"/> Out of Sequence<br><input type="checkbox"/> Outside Dimensions | <input type="checkbox"/> Ovalized<br><input type="checkbox"/> Over/Under tolerance<br><input type="checkbox"/> Part Incorrect<br><input type="checkbox"/> Part Lost/Missing<br><input type="checkbox"/> Part Moved<br><input type="checkbox"/> Positioned Wrong<br><input type="checkbox"/> Power Loss/Surge | <input type="checkbox"/> Pressure/Forced<br><input type="checkbox"/> Temperature/Cure<br><input type="checkbox"/> Weld<br><input type="checkbox"/> Wrong Stock Pulled<br><input type="checkbox"/> Other |

# Picklist Print

November-30-12 9:29:52 AM

Page 1

Work Order ID: 94147

Parent Item: D4271-027

Parent Item Name: End Fitting Assembly Aft Beam

Start Date: 11/30/12

Required Date: 12/14/12

Start Qty: 4.00

Required Qty: 4.00

Comments: IPP revA 11.07.20 new issue EC verified by:JLM

| Component Item ID/<br>Item Name | Replacement<br>Item ID | Mfg/<br>Purch | Bin<br>Item | Primary<br>Location | Last<br>Location | Route<br>Seq ID | Unit of<br>Measure | Qty on<br>Hand  | Qty per Kit | Total<br>Qty | Qty<br>Issued | Date<br>Issued | Status |
|---------------------------------|------------------------|---------------|-------------|---------------------|------------------|-----------------|--------------------|-----------------|-------------|--------------|---------------|----------------|--------|
| D4148-3<br>Stud Receiver, Lower |                        | Manufactured  | No          |                     |                  | 100             | Each               | 12.0000         | 1           |              |               |                |        |
|                                 |                        |               |             | <u>Location</u>     |                  | <u>Loc Qty</u>  |                    | <u>Loc Code</u> |             |              |               |                |        |
|                                 |                        |               |             | ST145               |                  | 12              |                    |                 |             |              |               |                |        |
|                                 |                        |               |             | 92746               |                  | 12              |                    |                 |             |              |               |                |        |
| X D4148-5<br>Eyebolt Stud       |                        | Manufactured  | No          |                     |                  | 100             | Each               | 3.0000          | 1           |              |               |                |        |
|                                 |                        |               |             | <u>Location</u>     |                  | <u>Loc Qty</u>  |                    | <u>Loc Code</u> |             |              |               |                |        |
|                                 |                        |               |             | GA                  |                  | 3               |                    |                 |             |              |               |                |        |
|                                 |                        |               |             | 90162               |                  | 3               |                    |                 |             |              |               |                |        |
| D4281-3<br>Spacer               |                        | Manufactured  | No          |                     |                  | 100             | Each               | 10.0000         | 1           |              |               |                |        |
|                                 |                        |               |             | <u>Location</u>     |                  | <u>Loc Qty</u>  |                    | <u>Loc Code</u> |             |              |               |                |        |
|                                 |                        |               |             | GA                  |                  | 1               |                    |                 |             |              |               |                |        |
|                                 |                        |               |             | 87989               |                  | 1               |                    |                 |             |              |               |                |        |
|                                 |                        |               |             | ST103               |                  | 9               |                    |                 |             |              |               |                |        |
|                                 |                        |               |             | 87641               |                  | 9               |                    |                 |             |              |               |                |        |
| D4419-3<br>Aft Support Plate    |                        | Manufactured  | No          |                     |                  | 100             | Each               | 5.0000          | 2           |              |               |                |        |
|                                 |                        |               |             | <u>Location</u>     |                  | <u>Loc Qty</u>  |                    | <u>Loc Code</u> |             |              |               |                |        |
|                                 |                        |               |             | ST108               |                  | 5               |                    |                 |             |              |               |                |        |
|                                 |                        |               |             | 88299               |                  | 5               |                    |                 |             |              |               |                |        |
| AN4C13A<br>BOLT                 |                        | Purchased     | No          |                     |                  | 100             | Each               | 27.0000         | 2           |              |               |                |        |
|                                 |                        |               |             | <u>Location</u>     |                  | <u>Loc Qty</u>  |                    | <u>Loc Code</u> |             |              |               |                |        |
|                                 |                        |               |             | ST356               |                  | 20              |                    |                 |             |              |               |                |        |
|                                 |                        |               |             | 122808              |                  | 20              |                    |                 |             |              |               |                |        |
|                                 |                        |               |             | ST357               |                  | 7               |                    |                 |             |              |               |                |        |
|                                 |                        |               |             | 121827              |                  | 3               |                    |                 |             |              |               |                |        |
|                                 |                        |               |             | 122141              |                  | 4               |                    |                 |             |              |               |                |        |

VS B93419 SP

SP 11/30/12  
B94187 (S)

VS SP

VS  
2 B95371 SP

210 m123900  
SP13-3-14

NCR: Yes / No

**WORK ORDER NON-CONFORMANCE / UPDATE**

DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

|  |                                    |  |                                      |   |                   |  |             |              |              |  |  |                                    |                                    |                                    |                                      |                                    |                                    |  |                                  |  |                                    |  |                                |                                    |                                    |                                   |  |
|--|------------------------------------|--|--------------------------------------|---|-------------------|--|-------------|--------------|--------------|--|--|------------------------------------|------------------------------------|------------------------------------|--------------------------------------|------------------------------------|------------------------------------|--|----------------------------------|--|------------------------------------|--|--------------------------------|------------------------------------|------------------------------------|-----------------------------------|--|
| Work Order: _____<br><br>Part No. _____<br><br>NCR No. _____ |                                    |  |                                      | <b>DISPOSITION</b><br><br>Rework <input type="checkbox"/><br>Scrap <input type="checkbox"/><br>Use-as-is <input type="checkbox"/><br>Work Order Update <input type="checkbox"/> |                   | <b>AGAINST DEPARTMENT/PROCESS</b><br><br><table style="width:100%; border: none;"> <tr> <td style="width:25%;">Skid-tube <input type="checkbox"/></td> <td style="width:25%;">Crosstube <input type="checkbox"/></td> <td style="width:25%;">Water Jet <input type="checkbox"/></td> <td style="width:25%;">Engineering <input type="checkbox"/></td> </tr> <tr> <td>Machining <input type="checkbox"/></td> <td>Small Fab <input type="checkbox"/></td> <td>Prod. Eng. Coord. <input type="checkbox"/></td> <td>Quality <input type="checkbox"/></td> </tr> <tr> <td>Thermoforming <input type="checkbox"/></td> <td>Finishing <input type="checkbox"/></td> <td>Rec/Store/Packaging <input type="checkbox"/></td> <td>Other <input type="checkbox"/></td> </tr> <tr> <td>Large Fab <input type="checkbox"/></td> <td>Composite <input type="checkbox"/></td> <td>Supplier <input type="checkbox"/></td> <td></td> </tr> </table> |             |              |              |  |  | Skid-tube <input type="checkbox"/> | Crosstube <input type="checkbox"/> | Water Jet <input type="checkbox"/> | Engineering <input type="checkbox"/> | Machining <input type="checkbox"/> | Small Fab <input type="checkbox"/> | Prod. Eng. Coord. <input type="checkbox"/> | Quality <input type="checkbox"/> | Thermoforming <input type="checkbox"/> | Finishing <input type="checkbox"/> | Rec/Store/Packaging <input type="checkbox"/> | Other <input type="checkbox"/> | Large Fab <input type="checkbox"/> | Composite <input type="checkbox"/> | Supplier <input type="checkbox"/> |  |
| Skid-tube <input type="checkbox"/>                           | Crosstube <input type="checkbox"/> | Water Jet <input type="checkbox"/>           | Engineering <input type="checkbox"/> |   |                   |  |             |              |              |  |  |                                    |                                    |                                    |                                      |                                    |                                    |  |                                  |  |                                    |  |                                |                                    |                                    |                                   |  |
| Machining <input type="checkbox"/>                           | Small Fab <input type="checkbox"/> | Prod. Eng. Coord. <input type="checkbox"/>   | Quality <input type="checkbox"/>     |   |                   |  |             |              |              |  |  |                                    |                                    |                                    |                                      |                                    |                                    |  |                                  |  |                                    |  |                                |                                    |                                    |                                   |  |
| Thermoforming <input type="checkbox"/>                       | Finishing <input type="checkbox"/> | Rec/Store/Packaging <input type="checkbox"/> | Other <input type="checkbox"/>       |   |                   |  |             |              |              |  |  |                                    |                                    |                                    |                                      |                                    |                                    |  |                                  |  |                                    |  |                                |                                    |                                    |                                   |  |
| Large Fab <input type="checkbox"/>                           | Composite <input type="checkbox"/> | Supplier <input type="checkbox"/>            |                                      |   |                   |  |             |              |              |  |  |                                    |                                    |                                    |                                      |                                    |                                    |  |                                  |  |                                    |  |                                |                                    |                                    |                                   |  |
| Root Cause   | Date                               | Step   | Qty                                  | Description of work order update or Non-conformance   | Initial Chief Eng | Action Description   | Sign & Date | Verification | QC Inspector |  |  |                                    |                                    |                                    |                                      |                                    |                                    |  |                                  |  |                                    |  |                                |                                    |                                    |                                   |  |
| Doc/Data <input type="checkbox"/>                            |                                    |  |                                      |   |                   |  |             |              |              |  |  |                                    |                                    |                                    |                                      |                                    |                                    |  |                                  |  |                                    |  |                                |                                    |                                    |                                   |  |
| Equip/Tooling <input type="checkbox"/>                       |                                    |  |                                      |   |                   |  |             |              |              |  |  |                                    |                                    |                                    |                                      |                                    |                                    |  |                                  |  |                                    |  |                                |                                    |                                    |                                   |  |
| Operator <input type="checkbox"/>                            |                                    |  |                                      |   |                   |  |             |              |              |  |  |                                    |                                    |                                    |                                      |                                    |                                    |  |                                  |  |                                    |  |                                |                                    |                                    |                                   |  |
| Material <input type="checkbox"/>                            |                                    |  |                                      |   |                   |  |             |              |              |  |  |                                    |                                    |                                    |                                      |                                    |                                    |  |                                  |  |                                    |  |                                |                                    |                                    |                                   |  |
| Setup <input type="checkbox"/>                               |                                    |  |                                      |   |                   |  |             |              |              |  |  |                                    |                                    |                                    |                                      |                                    |                                    |  |                                  |  |                                    |  |                                |                                    |                                    |                                   |  |
| Other <input type="checkbox"/>                               |                                    |  |                                      |   |                   |  |             |              |              |  |  |                                    |                                    |                                    |                                      |                                    |                                    |  |                                  |  |                                    |  |                                |                                    |                                    |                                   |  |
| Process <input type="checkbox"/>                             |                                    |  |                                      |   |                   |  |             |              |              |  |  |                                    |                                    |                                    |                                      |                                    |                                    |  |                                  |  |                                    |  |                                |                                    |                                    |                                   |  |
| Supplier <input type="checkbox"/>                            |                                    |  |                                      |   |                   |  |             |              |              |  |  |                                    |                                    |                                    |                                      |                                    |                                    |  |                                  |  |                                    |  |                                |                                    |                                    |                                   |  |
| Training <input type="checkbox"/>                            |                                    |  |                                      |   |                   |  |             |              |              |  |  |                                    |                                    |                                    |                                      |                                    |                                    |  |                                  |  |                                    |  |                                |                                    |                                    |                                   |  |
| Unapproved <input type="checkbox"/>                          |                                    |  |                                      |   |                   |  |             |              |              |  |  |                                    |                                    |                                    |                                      |                                    |                                    |  |                                  |  |                                    |  |                                |                                    |                                    |                                   |  |

| FAULT CATEGORY   |   |   |   |
|--|---|---|---|
| <b>Landing Gear</b><br><input type="checkbox"/> Bending<br><input type="checkbox"/> Centre Not Concentric to O/S<br><input type="checkbox"/> Cracks<br><input type="checkbox"/> Crushed/Crimped.<br><input type="checkbox"/> Cuffs<br><input type="checkbox"/> Heat Treat<br><input type="checkbox"/> Inspection Strip in Tube<br><input type="checkbox"/> Ripples in Bend<br><input type="checkbox"/> Torque Waves in Extrusion<br><input type="checkbox"/> Turning Sequence<br><input type="checkbox"/> Wave/Twist in Tube | <b>General</b><br><input type="checkbox"/> Bend<br><input type="checkbox"/> BOM/Route<br><input type="checkbox"/> Broken/Damaged<br><input type="checkbox"/> Burrs<br><input type="checkbox"/> Contamination<br><input type="checkbox"/> Countersink<br><input type="checkbox"/> Cut Too Short<br><input type="checkbox"/> Drill Holes<br><input type="checkbox"/> Drawing<br><input type="checkbox"/> Finish<br><input type="checkbox"/> Folio | <input type="checkbox"/> Grain<br><input type="checkbox"/> Hardware<br><input type="checkbox"/> Inspection Incomplete<br><input type="checkbox"/> Instructions Incomplete/Unclear<br><input type="checkbox"/> Maintenance<br><input type="checkbox"/> Mislabeled<br><input type="checkbox"/> Misread<br><input type="checkbox"/> Offset<br><input type="checkbox"/> Out of Calibration<br><input type="checkbox"/> Out of Sequence<br><input type="checkbox"/> Outside Dimensions | <input type="checkbox"/> Ovalized<br><input type="checkbox"/> Over/Under tolerance<br><input type="checkbox"/> Part Incorrect<br><input type="checkbox"/> Part Lost/Missing<br><input type="checkbox"/> Part Moved<br><input type="checkbox"/> Positioned Wrong<br><input type="checkbox"/> Power Loss/Surge<br><br><input type="checkbox"/> Pressure/Forced<br><input type="checkbox"/> Temperature/Cure<br><input type="checkbox"/> Weld<br><input type="checkbox"/> Wrong Stock Pulled<br><br><input type="checkbox"/> Other |

# Picklist Print

November-30-12 9:29:52 AM

Page 2

Work Order ID: 94147

Parent Item: D4271-027

Parent Item Name: End Fitting Assembly Aft Beam

Start Date: 11/30/12

Required Date: 12/14/12

Start Qty: 4.00

Required Qty: 4.00

\*MS20427M4-20  
RIVET

Purchased

No

100

Each

144.0000

1

Location

Loc Qty

Loc Code

GA

144

118429

144

MS20615-4M18  
Rivet

Purchased

No

100

Each

554.0000

10

Location

Loc Qty

Loc Code

ST312

554

121349

3

121444

15

122141

2

122452

7

123390

157

123810

370

MS21043-4  
Nut

Purchased

No

100

Each

1,239.0000

2

Location

Loc Qty

Loc Code

FG

36

104603

36

ST315

1203

119546

2

121162

25

121652

242

123021

500

123525

434

NAS1149C0432R  
Washer

Purchased

No

100

Each

3,822.0000

4

Location

Loc Qty

Loc Code

ST292

3822

117291

40

119124

652

121255

130

122441

3000

+5 12/13/14

40 50 m124859 sp

810 m123900

20 12-3-14

20x

November-30-12 9:29:52 AM

Shop Packet Print

Page 2

NCR: Yes / No

**WORK ORDER NON-CONFORMANCE / UPDATE**

DQA: \_\_\_\_\_ Date: \_\_\_\_\_

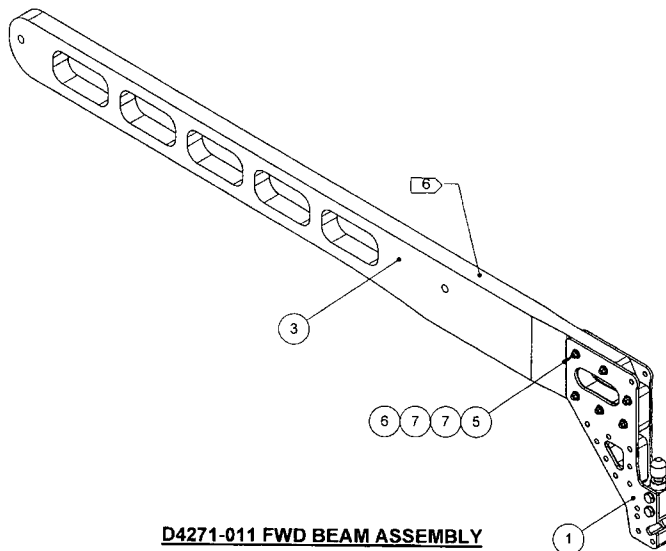
QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

| Work Order: _____<br><br>Part No. _____<br><br>NCR No. _____ |      |      |     | <b>DISPOSITION</b><br><br>Rework <input type="checkbox"/><br>Scrap <input type="checkbox"/><br>Use-as-is <input type="checkbox"/><br>Work Order Update <input type="checkbox"/> |                   | <b>AGAINST DEPARTMENT/PROCESS</b><br><br><div style="display: flex; justify-content: space-between;"> <div>           Skid-tube <input type="checkbox"/><br/>           Machining <input type="checkbox"/><br/>           Thermoforming <input type="checkbox"/><br/>           Large Fab <input type="checkbox"/> </div> <div>           Crosstube <input type="checkbox"/><br/>           Small Fab <input type="checkbox"/><br/>           Finishing <input type="checkbox"/><br/>           Composite <input type="checkbox"/> </div> <div>           Water Jet <input type="checkbox"/><br/>           Prod. Eng. Coord. <input type="checkbox"/><br/>           Rec/Store/Packaging <input type="checkbox"/><br/>           Supplier <input type="checkbox"/> </div> <div>           Engineering <input type="checkbox"/><br/>           Quality <input type="checkbox"/><br/>           Other <input type="checkbox"/> </div> </div> |             |              |              |  |  |
|--|------|------|-----|---|-------------------|---|-------------|--------------|--------------|--|--|
| Root Cause   | Date | Step | Qty | Description of work order update or Non-conformance   | Initial Chief Eng | Action Description  | Sign & Date | Verification | QC Inspector |  |  |
| Doc/Data <input type="checkbox"/>                            |      |      |     |   |                   |   |             |              |              |  |  |
| Equip/Tooling <input type="checkbox"/>                       |      |      |     |   |                   |   |             |              |              |  |  |
| Operator <input type="checkbox"/>                            |      |      |     |   |                   |   |             |              |              |  |  |
| Material <input type="checkbox"/>                            |      |      |     |   |                   |   |             |              |              |  |  |
| Setup <input type="checkbox"/>                               |      |      |     |   |                   |   |             |              |              |  |  |
| Other <input type="checkbox"/>                               |      |      |     |   |                   |   |             |              |              |  |  |
| Process <input type="checkbox"/>                             |      |      |     |   |                   |   |             |              |              |  |  |
| Supplier <input type="checkbox"/>                            |      |      |     |   |                   |   |             |              |              |  |  |
| Training <input type="checkbox"/>                            |      |      |     |   |                   |   |             |              |              |  |  |
| Unapproved <input type="checkbox"/>                          |      |      |     |   |                   |   |             |              |              |  |  |

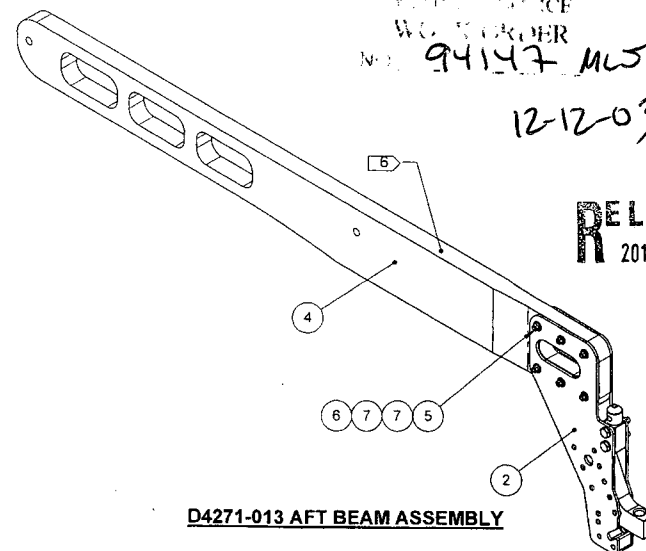
| FAULT CATEGORY   |  |  |   |  |  |   |  |  |  |  |   |  |
|--|--|--|---|--|--|---|--|--|--|--|---|--|
| <b>Landing Gear</b><br><input type="checkbox"/> Bending<br><input type="checkbox"/> Centre Not Concentric to O/S<br><input type="checkbox"/> Cracks<br><input type="checkbox"/> Crushed/Crimped.<br><input type="checkbox"/> Cuffs<br><input type="checkbox"/> Heat Treat<br><input type="checkbox"/> Inspection Strip in Tube<br><input type="checkbox"/> Ripples in Bend<br><input type="checkbox"/> Torque Waves in Extrusion<br><input type="checkbox"/> Turning Sequence<br><input type="checkbox"/> Wave/Twist in Tube |  |  | <b>General</b><br><input type="checkbox"/> Bend<br><input type="checkbox"/> BOM/Route<br><input type="checkbox"/> Broken/Damaged<br><input type="checkbox"/> Burrs<br><input type="checkbox"/> Contamination<br><input type="checkbox"/> Countersink<br><input type="checkbox"/> Cut Too Short<br><input type="checkbox"/> Drill Holes<br><input type="checkbox"/> Drawing<br><input type="checkbox"/> Finish<br><input type="checkbox"/> Folio |  |  | <input type="checkbox"/> Grain<br><input type="checkbox"/> Hardware<br><input type="checkbox"/> Inspection Incomplete<br><input type="checkbox"/> Instructions Incomplete/Unclear<br><input type="checkbox"/> Maintenance<br><input type="checkbox"/> Mislabeled<br><input type="checkbox"/> Misread<br><input type="checkbox"/> Offset<br><input type="checkbox"/> Out of Calibration<br><input type="checkbox"/> Out of Sequence<br><input type="checkbox"/> Outside Dimensions |  |  | <input type="checkbox"/> Ovalized<br><input type="checkbox"/> Over/Under tolerance<br><input type="checkbox"/> Part Incorrect<br><input type="checkbox"/> Part Lost/Missing<br><input type="checkbox"/> Part Moved<br><input type="checkbox"/> Positioned Wrong<br><input type="checkbox"/> Power Loss/Surge |  | <input type="checkbox"/> Pressure/Forced<br><input type="checkbox"/> Temperature/Cure<br><input type="checkbox"/> Weld<br><input type="checkbox"/> Wrong Stock Pulled<br><br><input type="checkbox"/> Other |  |



| ITEM | QTY<br>-011 | QTY<br>-013 | P/N           | DESCRIPTION                   |
|------|-------------|-------------|---------------|-------------------------------|
|      | X           |             | D4271-011     | FWD BEAM ASSEMBLY             |
|      |             | X           | D4271-013     | AFT BEAM ASSEMBLY             |
|      | -           | -           | D4271-021     | DELETED AT REVISION D         |
|      | -           | -           | D4271-023     | DELETED AT REVISION D         |
| 1    | 1           | -           | D4271-025     | FWD BEAM END FITTING ASSEMBLY |
| 2    | -           | 1           | D4271-027     | AFT BEAM END FITTING ASSEMBLY |
| 3    | 1           | -           | D4275-1       | FWD BEAM                      |
| 4    | -           | 1           | D4276-1       | AFT BEAM                      |
| 5    | 6           | 6           | AN3C12A       | BOLT                          |
| 6    | 6           | 6           | MS21043-3     | NUT                           |
| 7    | 12          | 12          | NAS1149C0332R | WASHER                        |



**D4271-011 FWD BEAM ASSEMBLY**



**D4271-013 AFT BEAM ASSEMBLY**

**NOTES:**

- 1) MATERIAL: N/A
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: N/A
- 6) IDENTIFICATION: IDENTIFY WITH DART IDENTIFY WITH DART P/N "D4271-0XX" AND B/N "BXXXXX"  
PER DART QSI 044 6.1 (FINE POINT MARKER)
- 7) WEIGHT -011: 11.02 lbs  
-013: 12.97 lbs

SHOT COPY  
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UNCONTROLLED COPY  
SUBJECT TO AMENDMENT  
WITH NO FORCE  
NO ORDER  
94147 MJS  
12-12-03

**RELEASED**  
2011-07-28

| D          | DELETED -021 & -023 REPLACED BY -025 & -027 FOR Q.R. STEP INSTALLATION.                    | AJS | 11.07.14 |
|------------|--|-----|----------|
| C          | ADDED -021 & -023 FOR EASE OF CONFIGURATION MANAGEMENT. REFORMAT SEE PREV REV FOR DETAILS. | AJS | 11.07.12 |
| B          | ITEM 10 CHANGED FROM AN3C12A TO AN4C13A  | SC  | 10.12.01 |
| A          | NEW ISSUE  | SC  | 10.11.25 |
| REV.       | DESCRIPTION  | BY  | DATE     |
| DESIGN     | JPH  |     |          |
| DRAWN      | AJS  |     |          |
| CHECKED    | GP   |     |          |
| MFG. APPR. | E  |     |          |
| APPROVED   | HP   |     |          |
| DE APPR.   | HP   |     |          |
| DATE       | 11.07.14   |     |          |

**DART AEROSPACE LTD**  
HAWKESBURY, ONTARIO, CANADA

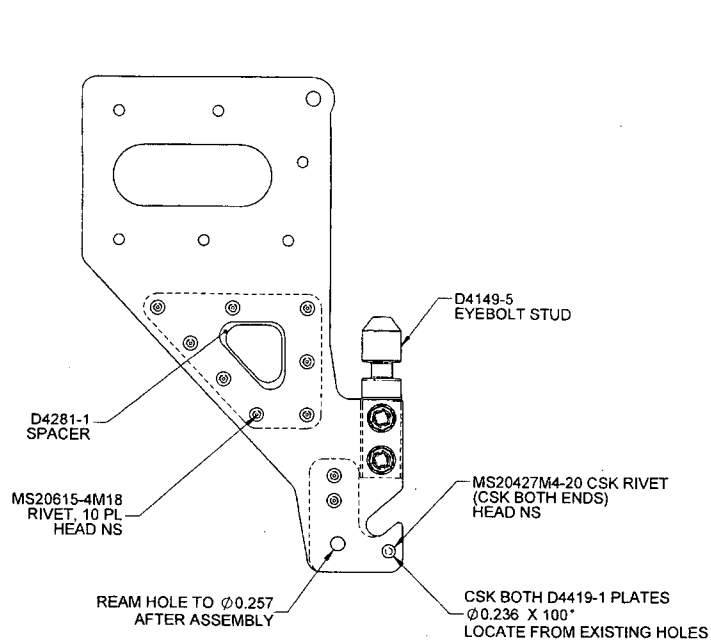
DRAWING NO. **D4271** REV. D  
SHEET 1 OF 3

TITLE **SUPPORT BEAM ASSEMBLIES** NTS  
SCALE

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94147

| ITEM | QTY | P/N           | DESCRIPTION                   |
|------|-----|---------------|-------------------------------|
|      | X   | D4271-025     | FWD BEAM END FITTING ASSEMBLY |
| 1    | 1   | D4149-5       | EYEBOLT STUD                  |
| 3    | 1   | D4281-1       | SPACER                        |
| 4    | 1   | D4281-3       | SPACER                        |
| 5    | 2   | D4419-1       | FWD SUPPORT PLATE             |
| 6    | 2   | AN4C13A       | BOLT                          |
| 7    | 1   | MS20427M4-20  | CSK RIVET (MONEL)             |
| 8    | 10  | MS20615-4M18  | RIVET (MONEL)                 |
| 9    | 2   | MS21043-4     | NUT                           |
| 10   | 4   | NAS1149C0432R | WASHER                        |



**D4271-025 FWD BEAM END FITTING ASSEMBLY**

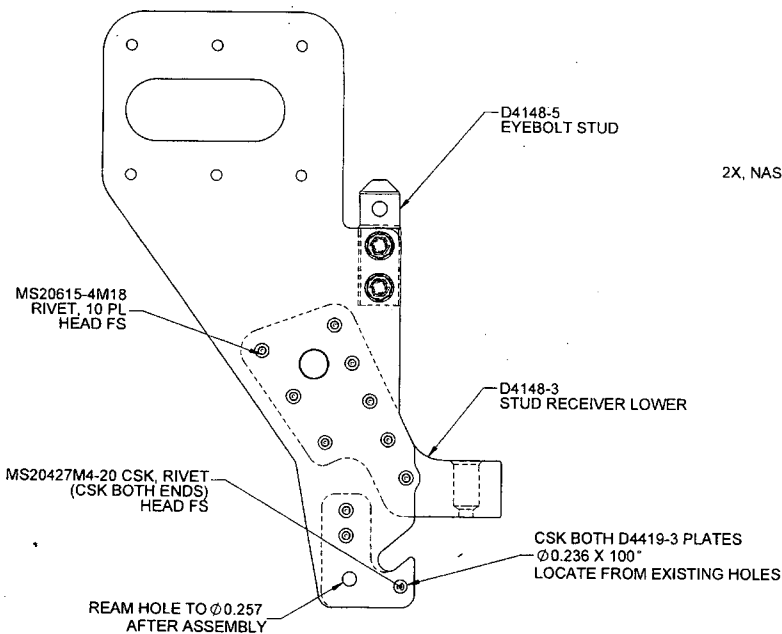
**NOTES:**

- 1) MATERIAL: N/A
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: N/A
- 6) IDENTIFICATION: IDENTIFY WITH DART IDENTIFY WITH DART P/N "D4271-025" AND B/N "BXXXXX" PER DART QSI 044 6.1 (FINE POINT MARKER)
- 7) WEIGHT: 2.69 lbs

|            |          |  |              |
|------------|----------|--|--------------|
| DESIGN     | JPH      | <b>DART AEROSPACE LTD</b>  |              |
| DRAWN      | AJS      | HAWKESBURY, ONTARIO, CANADA  |              |
| CHECKED    |          | DRAWING NO.  | REV. D       |
| MFG. APPR. |          | D4271  | SHEET 2 OF 3 |
| APPROVED   |          | TITLE  | SCALE        |
| DE APPR.   |          | <b>SUPPORT BEAM ASSEMBLIES</b>   |              |
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94147

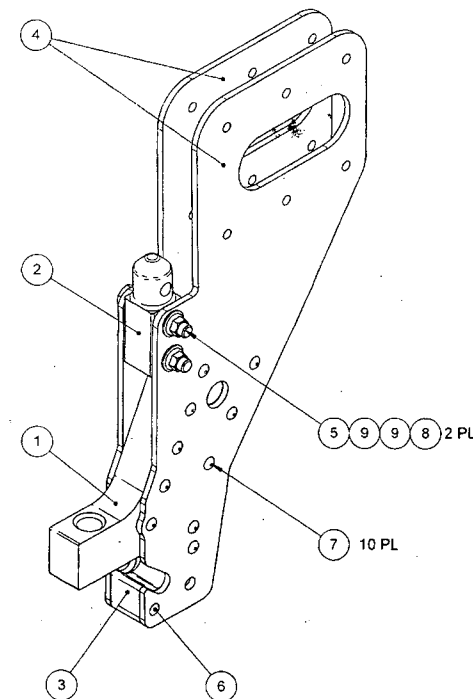
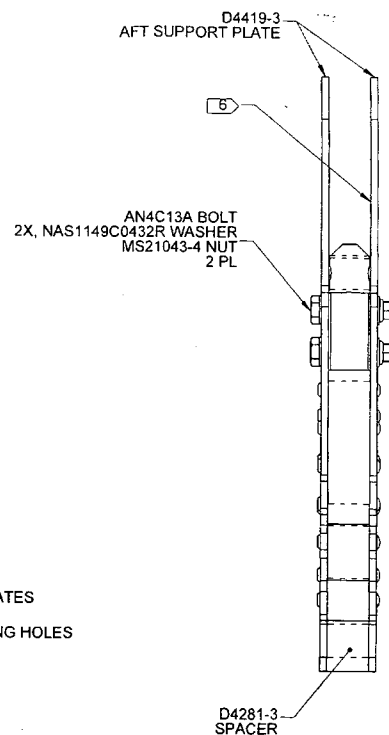
| ITEM | QTY<br>-027 | P/N           | DESCRIPTION                   |
|------|-------------|---------------|-------------------------------|
|      | X           | D4271-027     | AFT BEAM END FITTING ASSEMBLY |
| 1    | 1           | D4148-3       | STUD RECEIVER LOWER           |
| 2    | 1           | D4148-5       | EYEBOLT STUD                  |
| 3    | 1           | D4281-3       | SPACER                        |
| 4    | 2           | D4419-3       | AFT SUPPORT PLATE             |
| 5    | 2           | AN4C13A       | BOLT                          |
| 6    | 1           | MS20427M4-20  | CSK RIVET (MONEL)             |
| 7    | 10          | MS20615-4M18  | RIVET (MONEL)                 |
| 8    | 2           | MS21043-4     | NUT                           |
| 9    | 4           | NAS1149C0432R | WASHER                        |



**D4271-027 AFT BEAM END FITTING ASSEMBLY**

**NOTES:**

- 1) MATERIAL: N/A
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: N/A
- 6) IDENTIFICATION: IDENTIFY WITH DART IDENTIFY WITH DART P/N "D4271-027" AND B/N "BXXXXX" PER DART QSI 044 6.1 (FINE POINT MARKER)
- 7) WEIGHT: 4.25 lbs



**RELEASED**  
2011-07-28

|  |                    |  |              |
|--|--------------------|--|--------------|
| DESIGN   | JPH                | <b>DART AEROSPACE LTD</b>              |              |
| DRAWN  | AJS                | HAWKESBURY, ONTARIO, CANADA            |              |
| CHECKED  | <i>[Signature]</i> | DRAWING NO.                            | REV. D       |
| MFG. APPR.   | <i>[Signature]</i> | D4271                                  | SHEET 3 OF 3 |
| APPROVED   | <i>[Signature]</i> | TITLE                                  | SCALE        |
| DE APPR.   | <i>[Signature]</i> | <b>SUPPORT BEAM ASSEMBLIES</b> NT      |              |
| DATE   | 11.07.14           | COPYRIGHT © 2010 BY DART AEROSPACE LTD |              |
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